CLAIMS

Now, therefore, the following is claimed:

1. A system for protecting configuration data of a programmable execution unit, comprising:

a programmable array; and

programming logic configured to receive configuration data and to program the programmable array, based on the configuration data, such that the programmable array comprises functional logic and activation logic, the activation logic configured to enable the functional logic upon detection of an activation key.

2. The system of claim 1, wherein a portion of the configuration data comprises data representative of an activation key, the programming logic configured to store the data representative of the activation key in the programmable array.

3. The system of claim 2 wherein the activation logic is further configured to compare a received bit stream to the stored data representative of the activation key, the activation logic further configured to enable the functional logic if a portion of the second bit stream matches the activation key.

4. The system of claim 2 wherein the data representative of the activation key comprises a copyright notice corresponding to the configuration data.

5. The system of claim 1, wherein a portion of the configuration data represents an activation key, the activation logic configured to cryptographically hash

the portion into a first hash value and store the first hash value in the programmable array.

6. The system of claim 5, wherein the activation logic is further configured to cryptographically hash a received bit stream into a second hash value, the activation logic further configured to compare the first hash value with the second hash value, the activation logic configured to enable the functional logic if the first hash value substantially corresponds to the second hash value.

7. The system of claim 6, wherein the activation key comprises a copyright notice corresponding to the configuration data.

8. A system for protecting configuration data of a programmable execution unit, comprising:

a programmable execution unit (PEU) comprising programming logic configured to receive configuration data for programming a programmable array resident on the PEU; and

a device configured to transmit an activation key to the programmable execution unit, the programmable array configured to enable the PEU in response to the transmitted activation key.

9. The system of claim 8, wherein the configuration data comprises functional logic configuration data and activation logic configuration data, the programming logic configured to program the programmable array with functional logic corresponding to the functional logic configuration data and activation logic corresponding to the activation logic configuration data.

10. The system of claim 9, wherein the activation logic configuration data comprises data representative of a valid activation key, the programming logic further configured to store the data in the array.

11. The system of claim 10, wherein the activation logic is configured to compare the stored data representative of the activation key with the transmitted activation key, the activation logic further configured to enable the PEU if the transmitted activation key and the data representative of the valid activation key are substantially similar.

12. An apparatus for protecting a design of a programmable execution unit (PEU), comprising:

a storage unit comprising configuration data;

a channel for transferring the configuration data from the storage unit to the PEU; and

a system controller configured to transmit an activation key to the PEU.

13. An apparatus as claimed in claim 12, wherein a portion of the configuration data comprises data representative of the activation key.

14. An apparatus as claimed in claim 13, wherein the PEU comprises activation logic configured to store the data representative of the activation key, the activation logic further configured to perform a comparison of the transmitted activation key and the stored data representative of the activation key, the activation logic further configured to enable the PEU if the comparison indicates substantial similarity.

15. A system for protecting configuration data of a programmable execution unit (PEU), comprising:

means for storing the configuration data;

means for transmitting the configuration data to the PEU;

means for programming the PEU in accordance with the configuration data; and

means for enabling the PEU when the programmable execution unit receives an activation key.

16. A method of protecting configuration data associated with a programmable execution unit (PEU), comprising the steps of:

transmitting the configuration data from a storage device to the PEU over a channel;

determining when all the configuration data has been transferred to the PEU; and

transferring an activation key to the PEU.

17. A method for protecting configuration data of a programmable execution unit (PEU), comprising the steps of:

receiving configuration data representative of a desired configuration for a PEU;

programming the PEU based on the configuration data;

receiving a bit stream;

monitoring the bit stream for an activation key; and

enabling the PEU in response to the activation key.

18. The method of claim 17, wherein the configuration data comprises a portion of data representative of an activation key and the programming step further comprises the steps of:

storing the data representative of the activation key on the PEU.

19. The method of claim 18, wherein the receiving a bit stream step further comprises the step of comparing the bit stream to the stored data representative of the activation key.

20. The method of claim 19, further comprising the step of:

enabling the execution unit if the bit stream corresponds to the data representative of the activation key.

21. A method for protecting configuration data of a programmable execution unit (PEU), comprising the steps of:

receiving configuration data;

programming the PEU, based on the configuration data, such that the programmable array comprises functional logic and activation logic; and

enabling the functional logic upon detection of an activation key by the activation logic.